

1 **CLAIMS**

2 1. A method comprising:

3 receiving a request to play a first audio file and a second audio file;

4 identifying a first effective start position associated with the first audio file;

5 identifying a fade-out position associated with the first audio file;

6 identifying a second effective start position associated with the second
7 audio file;

8 playing the first audio file from the first effective start position;

9 upon reaching the fade-out position associated with the first audio file:

10 fading-out playback of the first audio file; and

11 playing the second audio file from the second effective start position.

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13 2. A method as recited in claim 1 wherein the fade-out position is
14 located a predetermined time ahead of an effective end position associated with
15 the first audio file.

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17 3. A method as recited in claim 1 wherein the first effective start
18 position differs from the start of the first audio file.

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20 4. A method as recited in claim 1 further comprising fading-out
21 playback of the second audio file upon reaching a fade-out position associated
22 with the second audio file.

1 5. A method as recited in claim 1 wherein the first effective start
2 position and the fade-out position associated with the first audio file are stored in a
3 media library.

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5 6. A method as recited in claim 1 wherein the first effective start
6 position and the fade-out position associated with the first audio file are stored in
7 the first audio file.

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9 7. One or more computer-readable memories containing a computer
10 program that is executable by a processor to perform the method recited in claim
11 1.

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13 8. A method comprising:
14 receiving a request to analyze an audio file;
15 selecting the first two data samples in the audio file;
16 calculating an average value of the first two data samples in the audio file;
17 if the average value exceeds a threshold value, marking the second data
18 sample as an effective start position associated with the audio file and marking the
19 first data sample as silent;

20 if the average value does not exceed the threshold value:
21 selecting subsequent data samples in the audio file and updating the
22 average value of all selected data samples until the average value exceeds a
23 threshold value;

24 marking a current data sample as an effective start position
25 associated with the audio file; and

1 marking previously selected data samples as silent.

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3 **9.** A method as recited in claim 8 wherein the average value of the data
4 samples is calculated based on volume levels in the audio file.

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6 **10.** A method as recited in claim 8 further comprising saving the
7 effective start position associated with the audio file to a media library.

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9 **11.** A method as recited in claim 8 further comprising saving the
10 effective start position associated with the audio file to a storage device that stores
11 the audio file.

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13 **12.** A method as recited in claim 8 further comprising saving
14 information regarding data samples marked as silent to a storage device that stores
15 the audio file.

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17 **13.** A method as recited in claim 8 wherein the effective start position is
18 applied during subsequent playback of the audio file.

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20 **14.** A method as recited in claim 8 wherein the effective start position is
21 applied during subsequent playback of the audio file to determine a point at which
22 the audio file begins to fade-in as a previous audio file fades out.

1 **15.** One or more computer-readable memories containing a computer
2 program that is executable by a processor to perform the method recited in claim
3 8.

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5 **16.** A method comprising:
6 receiving a request to analyze an audio file;
7 selecting the last two data samples in the audio file;
8 calculating an average value of the last two data samples in the audio file;
9 if the average value exceeds a threshold value, marking the last data sample
10 as an effective end position associated with the audio file and marking the other
11 selected data sample as silent;
12 if the average value does not exceed the threshold value:
13 selecting previous data samples in the audio file and updating the
14 average value of all selected data samples until the average value exceeds a
15 threshold value;
16 marking a current data sample as an effective end position associated
17 with the audio file; and
18 marking previously selected data samples as silent.

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20 **17.** A method as recited in claim 16 wherein the method is performed by
21 a media player application.

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23 **18.** A method as recited in claim 16 further comprising saving the
24 effective end position associated with the audio file in a media library.
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1 **19.** A method as recited in claim 16 further comprising saving the
2 effective end position associated with the audio file to a storage device that stores
3 the audio file.

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5 **20.** A method as recited in claim 16 wherein the average value of the
6 data samples is calculated based on volume levels in the audio file.

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8 **21.** A method as recited in claim 16 further comprising saving
9 information regarding data samples marked as silent to a storage device that stores
10 the audio file.

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12 **22.** A method as recited in claim 16 wherein the effective end position is
13 applied during subsequent playback of the audio file.

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15 **23.** A method as recited in claim 16 wherein the effective end position is
16 applied during subsequent playback of the audio file to determine a point at which
17 the audio file begins to fade-out.

18
19 **24.** One or more computer-readable memories containing a computer
20 program that is executable by a processor to perform the method recited in claim
21 16.

1 **25.** An apparatus comprising:
2 a cross-fade parameter calculator to analyze an audio file and calculate at
3 least one fade-out parameter associated with the audio file;
4 a media library coupled to the cross-fade parameter calculator, the media
5 library to store fade-out parameters associated with a plurality of audio files; and
6 a cross-fader coupled to the media library, the cross-fader to apply fade-out
7 parameters during playback of audio files.

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9 **26.** An apparatus as recited in claim 25 wherein the cross-fade
10 parameter calculator calculates an effective start position associated with the audio
11 file.

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13 **27.** An apparatus as recited in claim 25 wherein the cross-fade
14 parameter calculator calculates an effective end position associated with the audio
15 file.

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17 **28.** An apparatus as recited in claim 25 wherein the cross-fader retrieves
18 fade-out parameters from the media library.

1 **29.** An apparatus comprising:
2 means for receiving a request to play a first audio file followed by a second
3 audio file;
4 means for identifying a first effective start position associated with the first
5 audio file, a fade-out position associated with the first audio file, and a second
6 effective start position associated with the second audio file; and
7 means for playing the first audio file from the first effective start position,
8 wherein upon reaching the fade-out position associated with the first audio file, the
9 means for playing fades-out playback of the first audio file and begins playing the
10 second audio file from the second effective start position.

11
12 **30.** An apparatus as recited in claim 29 wherein the fade-out position is
13 located a predetermined time prior to an effective end position associated with the
14 first audio file.

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16 **31.** An apparatus as recited in claim 29 wherein the means for playing
17 fades-out playback of the second audio file upon reaching a fade-out position
18 associated with the second audio file.

19
20 **32.** An apparatus as recited in claim 29 wherein the start position
21 associated with the first audio file, the fade-out position associated with the first
22 audio file, and the second effective start position associated with the second audio
23 file are retrieved from a media library.
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1 **33.** An apparatus as recited in claim 29 wherein the start position
2 associated with the first audio file and the fade-out position associated with the
3 first audio file are retrieved from the first audio file.

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5 **34.** One or more computer-readable media having stored thereon a
6 computer program that, when executed by one or more processors, causes the one
7 or more processors to:

8 receive a request to play a sequence of audio files;
9 calculate a first effective start position associated with a first audio file;
10 calculate a fade-out position associated with the first audio file;
11 calculate a second effective start position associated with a second audio
12 file;
13 play the first audio file from the first effective start position;
14 upon reaching the fade-out position associated with the first audio file:
15 fade-out playback of the first audio file; and
16 play the second audio file from the second effective start position.

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18 **35.** One or more computer-readable media as recited in claim 34
19 wherein the fade-out position associated with the first audio file is calculated by
20 subtracting a predetermined time period from an effective end position associated
21 with the first audio file.

1 **36.** One or more computer-readable media as recited in claim 34
2 wherein the one or more processors further fade-out playback of the second audio
3 file upon reaching a fade-out position associated with the second audio file.
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5 **37.** One or more computer-readable media as recited in claim 34
6 wherein the one or more processors further calculate effective start positions and
7 fade-out positions associated with each audio file in the sequence of audio files.
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